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30 OCT 1958

Mr. John T. Connor
President
Merck & Company, Inc.
Rahway, New Jersey

Dear Mr. Connor:

Thank you very much for the copies of your speech "A Global War Against Disease" which you were so good to send me.

As I told you, I was much impressed by its impact and I am bringing it to the attention of some of my people here. In regard to the speech you plan to give concerning the need for a foreign medical aid program, I would be quite interested in what you have to say about this important subject and shall look forward to receiving it.

Once again, many thanks and kindest regards.

Sincerely,

Allen W. Dulles
Director

O/DCI/ [] :dd 28 Oct 58

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MERCK & CO., Inc.

RAHWAY, NEW JERSEY

JOHN T. CONNOR
PRESIDENT

October 23, 1958

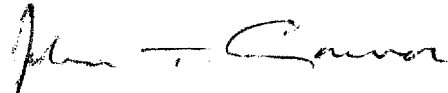
Mr. Allen W. Dulles
Director
Central Intelligence Agency
Washington, D. C.

Dear Mr. Dulles:

It is my privilege to enclose a half dozen copies of my recent speech, "A Global War Against Disease," as you requested.

You may be interested to know that I plan to make another speech about the need for a foreign medical aid program at the American Management Association Meeting in New York on November 5-7. In view of your interest, I shall see to it that you get several copies of that speech also.

Sincerely yours,



JTC:GMC
Enclosures

A Global War Against Disease

BY

JOHN T. CONNOR

President

MERCK & CO., INC.

Address delivered before

THE MANUFACTURING CHEMISTS' ASSOCIATION

White Sulphur Springs, West Virginia

June 12, 1958

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A GLOBAL WAR AGAINST DISEASE

As a representative of a relatively small branch of the great chemical industry, I appreciate the invitation to talk from this platform. Having pushed our sales volume well across the \$2 billion mark last year, we in the pharmaceutical and related fine and medicinal chemical industries are beginning to flex our muscles, but we are also fully conscious of our origins. Many of our products and processes were born in chemical laboratories here and abroad, and we are both willing and proud to invite public attention to their parentage.

We are willing and proud, too, to talk about our own contributions, particularly those to the health of the American people. But in this era of competitive co-existence, it is wise to look over our shoulder at what the Russians are doing before we drink any toasts to our achievements. I have done this and it has sobered me. Today I'll try to explain why.

Before I take the plunge, let me say that I am well aware of the dangers that beset all analyses of the Soviet system. I have had to depend, for the most part, on Soviet sources, which we should accept only with caution. This has been supplemented by written and oral reports of visiting British and American medical teams and the few postwar books on the subject.

I have not yet been to the Soviet Union myself.

One danger, however, does not concern me. That is the potential criticism of those who hold that failure always to condemn everything Soviet is tantamount to approval and failure to praise everything American is equivalent to criticism. I assume that this audience, as well as the speaker, believes that frank discussion is as important in medicine as it is in every other aspect of life. On that assumption, I shall try to give you the facts as straight as I can.

THE SOVIET THEORY

To understand Soviet medicine, we first must understand the theory around which it is organized. A sick man, in the Soviet view, is a parasite. He cannot shoulder a gun, run a tractor, tend a machine, or launch a satellite. The original Bolsheviks decided that, if Communism were to survive, Russia had to be strong; to be strong, it had to improve the health of the people. This was the theory. There has been no deviation from it since the beginning.

Lenin put it more graphically. At the height of a typhus epidemic in 1919 that killed about 3 million Russians, he told the Congress of the Soviets: "Comrades, either the louse defeats socialism or socialism defeats the louse."

The point of the story is not that socialism defeated the louse, which U. S. capitalism had routed long before. The point is that, since the October Revolution, the Bolsheviks have looked upon disease as an enemy of the State.

From the very beginning, they have seen a direct connection between health, life expectancy and industrial progress. At the time of the Revolution, the estimated life expectancy of the average Russian at birth was about 40 years. Such a short life meant that the State would get relatively few years of production out of the

average man in return for its initial investment in his food, clothing, shelter and education. The Kremlin was committed to a program of industrialization, the capital for which could be accumulated only out of the production minus the consumption of the workers and peasants. That left the Soviet Union with only two alternatives: either increase the actual length of life of its people enormously or else accept the fact that capital could not be accumulated fast enough to build a powerful modern state in less than a hundred years. The Russians chose to try to improve the health of the nation and lengthen life expectancy to Western levels.

The Soviets proceeded to do this without draining too much manpower and resources away from other major objectives. They launched a nation-wide campaign of sanitation and public health education. They built hospitals as fast as they could spare materials and labor from other projects. They established clinics in plants, offices and collective farms, so that sickness could be discovered early and the number of lost work days cut to the bone. They set up medical schools to mass produce general practitioners, public health doctors and pediatricians. They ordered their pharmaceutical industry to try to copy Western drugs.

THE SOVIET DOCTOR

Now let us take a closer look at some of the major aspects of Soviet medicine. First, the doctor. The most noteworthy aspect of the Russian doctor is her sex. Three out of four physicians are women. This is not surprising, since 45% of all employees in the Soviet Union are female. Women can be found in every occupation — from digging ditches to manning research laboratories.

After ten years of intensive elementary and

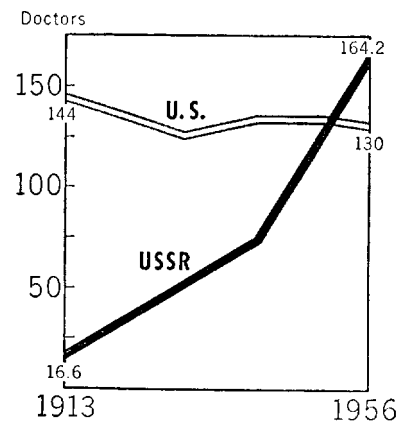
secondary education, including four years of chemistry, five of physics and six of biology, the prospective Russian doctor goes directly into medical school for six years. She pays no tuition; in fact, she gets a yearly stipend from the State and a bonus for good marks. On graduation, she takes no Hippocratic Oath. Her loyalty does not belong to her patients, but to the State. For the rest of her life, she is its employee and subject to its dicta.

According to official Russian statistics, this mill has been grinding out physicians at an impressive rate: 16,000 a year, or more than twice as many as the United States. Before the Revolution, there were only about 17 doctors for each 100,000 people in Russia. The rate of progress has been startling. By 1956 the proportion was already 25% better than ours: 164 per 100,000 people, compared with 130 per 100,000 in the United States.

Quality may be something else again. Including two years of internship and residency, an American doctor has had 22 years of education behind him before he starts to practice

DOCTORS

Per 100,000 Population



on his own. His Russian counterpart has had only 16. Well-qualified specialists are still scarce in the Soviet Union. And the average Russian physician is backed by poorer facilities, equipment and research. He has far fewer modern drugs and instruments at his disposal.

What is it like to be a doctor in Russia? By American standards, fairly dismal. Even by Soviet standards, not too good. The average pay is substantially less than that of a coal miner. The status, as well as the pay, is well below that of the high priority professions, such as engineering. Then there are all the frustrations of being an employee of an enormous bureaucracy, with Communist Party interference, work norms set by the Ministry of Health and mountains of red tape — “medical ethics and ideals trying to live under uncompromising political control,” as Dr. Gunnar Gunderson, President-elect of the American Medical Association put it on his return from the Soviet Union last Winter.

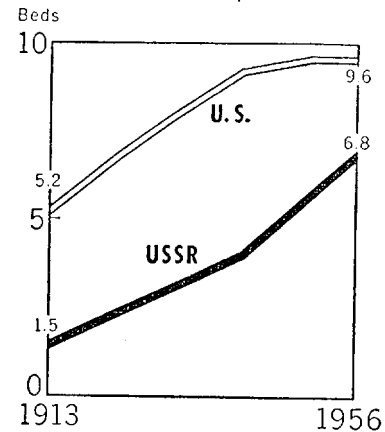
But there are compensations, particularly the rate of progress. An outstanding example of this is the enormous hospital construction program. By 1956 the Russians claim they had provided the doctors with 1,360,000 hospital beds, or about seven for every 1,000 persons. This still does not come up to the U. S. ratio of nearly ten beds for every 1,000 persons, but at their current rate of expansion the Soviets should be able to close the gap in less than five years.

THE SOVIET PATIENT

Let us now glance at Soviet medicine from the point of view of the patient. He doesn't see a family doctor; there is no such thing. He goes to the local polyclinic, where he gets free care from the physician on duty. The care will not be up to American standards of quality, but it

HOSPITAL BEDS

Per 1,000 Population



is interesting that competent Western observers have noted that it is warm, human and thorough.

The Russian patient may see a doctor as often when he is well as when he is sick. The Soviets give outstanding attention to preventive medicine. Periodic physical examinations to catch disease early begin with childhood. John Gunther found that Public School 151 near Moscow had a full-time doctor and nurse in attendance. Dr. T. F. Fox, who headed a British medical mission to Russia in 1954, reported that the populace may suddenly be confronted by a small team of specialists who have invaded a factory or office to examine everybody in it. In the eight years preceding his mission, he says, the Russians claim to have examined 60 million people for cancer using teams generally consisting of a surgeon, gynaecologist, radiologist and internist.

Now let us look at the two factors that have probably contributed most to the improvement

of America's health in the past decade: medical research and the development and production of new drugs. How have these two fared in the Soviet Union? So far, not too well.

SOVIET DRUGS

It is difficult to take the measure of Russian medical research. The consensus of those who have been to look seems to be that it has suffered from a relatively low priority since the Revolution, is now well behind the West but is beginning to pick up real momentum.

As for drugs, I have searched rather diligently and have yet to unearth a single important one that the Russians have developed on their own. They admit this. In the summer of 1956 the official text of the five-year plan for pharmacology made the following uncharacteristic confession: "In the search for new therapeutic agents, [the Soviet Union] still lags behind the large capitalist countries."

As you will see from this chart, every single

DISCOVERY OF DRUGS

Since the Russian Revolution

DRUG GROUPS	The West	USSR
Anti-Diabetics	Ⓡ	○
Vitamins	Ⓡ	○
Sulfa Drugs	Ⓡ	○
Antibiotics	Ⓡ	○
Hormones	Ⓡ	○
Anti-Hypertensives	Ⓡ	○
Mental Health Drugs	Ⓡ	○
TOTAL	7	○

major drug group developed since the Russian Revolution was discovered by the West: the anti-diabetics, vitamins, sulfa drugs, antibiotics, hormones, anti-hypertensives and mental health drugs. The Soviet score to date is: Zero.

The reason is quite simple. Moscow found that it was far less costly to pirate Western drugs than to discover and develop their own. It usually takes many million dollars of research, development and testing before an American pharmaceutical company can deliver a major new drug to the medical profession for general use. And, before the Russians could duplicate our success, they would have to make, as we have, a national investment of time and billions of dollars to build up the needed skills, experience and facilities already possessed by our industry, universities, research institutes and government.

Pirating drugs, however, is not an easy game, as the Soviets are now learning. It is one thing to translate our medical journals and patent applications and make a Chinese copy of an uncomplicated remedy. But some of our most important new drugs are extremely difficult for even our own highly developed pharmaceutical industry to manufacture and have turned out to be too complex for the present skills and facilities of the Russians. The five-year plan, referred to above, contains a long list of drugs that are in common use in this country but had not yet been made available to Soviet physicians.

One example will suffice. This is cortisone, which, I am pleased to point out, was first synthesized in a practical way a full decade ago by a young Merck chemist, Dr. Lewis Sarett, following the trail-blazing work of Dr. E. C. Kendall. The Russian pharmaceutical industry is still fumbling with it ten years later. In contrast, it is my painful duty to relate, Merck's

competitors here at home were so highly developed that it took them only a very short time after being licensed to get into the cortisone competition. And some of them even took the lead with their own improvements.

Since 1935, Soviet patients have had to pay for their prescriptions, and, you will be interested to learn, they are as articulate on the subject of high prices as the average American.

The Soviet drug industry is the target of many other complaints: recurrent shortages, maldistribution, and acres of red tape that stick to everything like old-fashioned fly paper. The Minister of Health talks publicly about "sabotage" and *Pravda*, in typical Soviet gobbledygook, about "flagrant examples of the incorrect attitude toward the dissemination of the achievements of science."

The stickiness of Russian bureaucracy has never been better described than by the popular Soviet writer, Vladimir Dudintsev. I recommend that you read his remarkable novel, "Not by Bread Alone," which was recently published in the United States. In the meantime, listen for a moment to this letter in the Soviet humor magazine *Krokodil*:

"Six years ago our mine was to be equipped with X-ray equipment. Five years ago we complained to the Khabarovsk Health Department, to the Health Ministry and to the Ministry of Nonferrous Metals on the one-year's delay in obtaining the equipment. Four years ago we described the two-years' delay; three years ago, the three-year delay. Two years ago we wrote about the four-year bureaucratic tangle on the same X-ray equipment, and a year ago we received the apparatus. But now, dear *Krokodil*, we are complaining of the yearly delay in having an X-ray specialist assigned to us. We sent our man to learn this difficult occupation. They trained him and assigned him else-

where. What are the prospects for this year?"

After reading a few hundred of these complaints, dear *Krokodil* himself may be ready to do a little of what the Russians so quaintly call "incorrect thinking" and speculate about the efficiency of competitive capitalism, which has made possible in the United States a high rate of discovery of new medical products, abundant production, fast distribution and rapidly declining prices.

SOVIET OPINION

Now, in view of all this criticism, what do the Russians themselves think of the medical treatment they receive? Even the refugees from Soviet tyranny are sold on it, as Dr. Mark Field of the Russian Research Center at Harvard, author of the recent book entitled, "Doctor and Patient in Soviet Russia," discovered when he interviewed 1,650 of them in Germany and the United States. The main reason apparently is that medical care has been used from the beginning by the Kremlin not only to raise the productivity of the Soviet Union but also to make propaganda for the Communist Party. This propaganda has left its mark. From the point of view of popular approval by the Russians themselves, the Soviet health program may well have been the most successful innovation the Russians have introduced in the forty years since their Revolution.

Let me now ask a question I have asked myself. It is a rather chilling question and I am not yet sure of the answer. Is the Soviet system of medicine, along with the enormous support and loyalty it generates, exportable to the underdeveloped countries of the world? I have no doubt that the Russians are getting ready for export, otherwise they would have begun by now to slow down their production of doctors,

nurses, and other health personnel, who now number about 2,750,000 persons — or better than one out of every hundred citizens.

THE SOVIET RESULTS

Before we rate ourselves against this kind of competition, let us just see how well the Soviet medical system stacks up in terms of results. There is no yardstick that will measure all the aspects of a nation's health. The one that comes closest and is both objective and readily understood is the longevity rate, or the average length of life. Fortunately, the Soviet Union has recently published some information on longevity, so we now have a basis for comparing the results of her health program with our own.

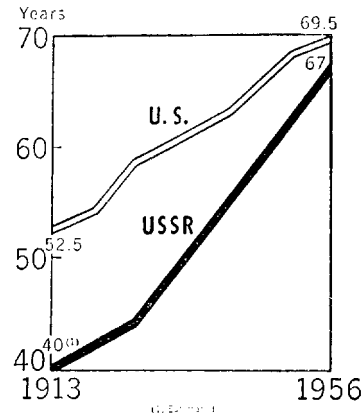
Before I quote the figures, however, let me give you two guideposts on Russian statistics. On the one hand, they are nowhere near as valid as our own. They are based on incomplete information and no raw data are available with which to cross-check the conclusions. On the other hand, the experts warn us that Russian statistics are not pure fabrication. The Soviets have probably done their best. We would do well to accept what is handed out as at least representative of the truth.

With this caution, I shall now turn the microphone over to the Soviet Minister of Health, Madame Kovrigina, and let her report to you in her own words. This is what she told the Congress of the Supreme Soviet last Fall on the fortieth anniversary of the Revolution:

"As a result of the steady rise in the economic power of the Soviet State and of the ceaseless concern of the Party and Government with the development of public health, there have been great improvements in the state of the people's health. . . . As regards a number of statistical rates, the Soviet Union has taken

LONGEVITY

Life Expectancy at Birth



first place by comparison with the leading capitalistic countries. . . . The level of life expectancy in our country has risen from 32 years in 1896-97 to 44 years in 1926-27 and to 67 years in 1955-56."

The Soviets have made this remarkable record by cutting their mortality rate 75% since the Revolution. They have made most of their progress in fairly recent years. By 1927, their longevity rate was still more than a quarter of a century behind ours. By 1956 they had pulled themselves up to within reaching distance: a life expectancy at birth of 67 years compared with 69.5 in the United States.

But before we project their steep curve of progress too far into the future, let me try for a moment to put it into a little perspective. In the first place, it is not unique. Our own Territory, Puerto Rico, with its Operation Bootstrap, has done even better. In just 15 years it added 50% to the average length of life of its citizens. By 1955 it had passed the Soviet Union and reached a life expectancy of 68 years. And all this was accomplished, not by sacrificing freedom, but by extending it.

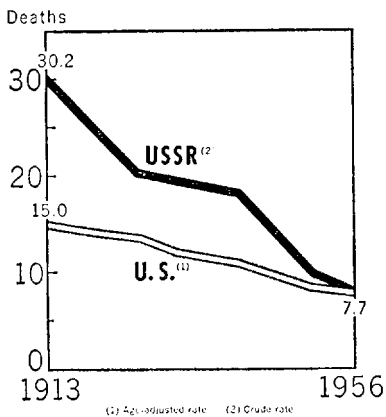
Secondly, the Russians have made most of their progress in longevity simply by borrowing Western methods of sanitation and the control of contagious diseases. As one doctor explained to me, up until the discovery of the sulfa drugs in the middle 'thirties gave birth to the modern pharmaceutical industry, most of the credit for raising our life expectancy should go to the much lampooned American craze for modern plumbing.

THE FUTURE

So much for the past. Now what about the future? Before I answer that question, let me put it within the context of the Soviet Union's long-term growth. We have always thought that our massive, dynamic economy — still twice the size of theirs — would give us enough surplus to take on any new challenge from the Russians, be it the production of weapons, the education of scientists or the lengthening of life. But can we be so sure?

MORTALITY

Death Rate per 1,000 Population



For too many years now I, for one, have been focusing my attention on the weaknesses of the Soviet economy and brushing off the evidence of its enormous vigor and its growing strength. For 30 years now, ever since the first Five-Year Plan was launched in 1928, the Russians have expanded their economy at a rate twice as fast as ours, despite the devastation of World War II. We would do well if we took seriously the inaugural promise Nikita Khrushchev made when he became Premier in March and said: "We shall conquer capitalism with a high level of work and a higher standard of living." A few weeks later he was even more graphic about it when he told our Ambassador at a reception in Moscow: "Watch out, Mr. Thompson, we are treading on your tail."

The head of our Central Intelligence Agency, Allen Dulles, has recently spelled out the clear meaning of this for America. The economic expansion of Russia, he warned, is "the most serious challenge this country has ever faced in time of peace." That challenge, in blunt words, is to make the United States into a second-class power.

MEDICINE AND FOREIGN POLICY

The dimensions of the threat to freedom are now clear. They stretch right across the spectrum of human needs. If the Soviet Union can meet these needs more efficiently than we can, it will, at least in the short run, win the allegiance of most of mankind.

One of the most fundamental of these needs is the one I have been talking about with you today: good health and a reasonably long life. The Soviet Union has made gigantic strides toward filling this need at home. Should it continue its present rate of progress for another

five years and then start exporting trained medical teams to sell Communism as the only way to fight disease, it will surely be treading on our tails as we search for friends among the underdeveloped people of the world. Let us remember that, in the long stretch of history, disease has ranked with hunger as man's worst enemy. War, so far, has run a poor third.

Let me translate this into the eloquent words of Dr. Thomas A. Dooley, whose book, "The Edge of Tomorrow," was published three weeks ago. Dr. Dooley had been a young Navy physician in Vietnam in 1954 when he and four unskilled enlisted men volunteered for the hopeless job of giving primitive medical care to half a million refugees streaming down from the North ahead of the Communists. This is what he said he had learned from that experience:

"We had seen simple, tender loving care — the crudest kind of medicine practiced by mere boys — change a people's fear and hatred into friendship and understanding. We had witnessed the power of medical aid to reach the hearts and souls of a nation. We had seen it translate the brotherhood of man into a reality plain people could understand.

"It made me proud to be an American doctor. But it also left me baffled. For why did our foreign-aid planners, with their billion-dollar projects, ignore the enormous possibilities of medical aid? Since those possibilities were Christ-like in power and simplicity, I could not understand it."

SOVIETS CHALLENGED TO A LONGEVITY RACE

Most of us have never thought of medicine as an instrument of foreign policy. On this subject, our instincts as a people are purely humanitarian. This is as it should be. But this

generation of Americans is caught in the midst of a battle to win the hearts and souls of nations — not for the United States, but for the rights of man. When the Soviet Union sallies forth from its borders promising good health in exchange for freedom, shall we be unprepared?

The future is quite clear. The question is not whether we will have to prepare, but how. How shall we summon up the national will to take the necessary steps and make the necessary sacrifices? The most effective way in a democracy, it seems to me, is through a program of public education focused on a national objective that everyone can understand and most citizens will work to achieve.

A spirited competition with the Russians in the field of health would satisfy these requirements. It would also be in line with our humanitarian traditions. In such a contest the only real loser would be disease.

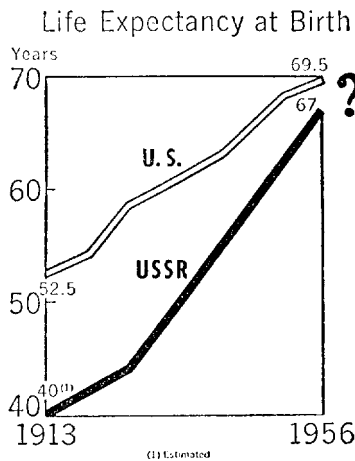
Let us, then, challenge the Soviet Union to a new kind of competition — a longevity race. Let us pit our patient-oriented system of medicine against the State-oriented system of Russia to see which of us can first attain for our citizens an average life expectancy of three-quarters of a century.

With our life expectancy at 69.5, we have a little more than five years to add to reach the goal of 75. The Soviets say they are not far behind and are coming up fast. It should be a beneficial competition and promises to be a tough race.

Some of us, particularly if we are young, may think of Psalm 90, verse 10, which says: "The years of our life are threescore years and ten; and, if by reason of strength, they be fourscore, yet is their span but toil and trouble." One could ask: Why more years?

This is a good question. But the answer is

LONGEVITY RACE



even better. Toil and trouble notwithstanding, man's most primitive urge is to live, no matter how young or how old he is. The progress of Western culture is measured by the high value we place on the life of a single human being.

LONGEVITY NOT JUST A STATISTIC

Longevity is not just a statistic. We can increase it only by saving the lives of many of the 112,000 infants who died last year before they had a chance, of the 75,000 men and women who were struck down by cancer in their thirties, forties and fifties, of the 158,000 whose heart or blood vessels failed them before they had even tasted the first year of retirement. If we lengthen life for the average man, we will also enrich it, by improving the health and increasing the enjoyment of all mankind.

From here on in the longevity race is going to be rigorous, which is one of the reasons I am confident we can beat the Russians. Sanitation, the control of epidemics, the prevention and cure of contagious diseases — these are mostly behind us. Ahead lie cancer, cardiovascular dis-

eases, the degenerative and crippling scourges of old age. Medical research, in which we are far stronger than the Soviets, is going to make the major breakthroughs.

But the attack will have to be on a broader front than that. It will also have to be carried out without either weakening the institutions of freedom or damaging the doctor-patient relationship, which is the keystone of American medicine.

A GLOBAL WAR AGAINST DISEASE

Here are some of the things it seems to me we will have to do in order to win the race for a longer life:

1. Greatly expand our medical research effort. The Government, pharmaceutical industry, universities and research institutes are now spending about \$400 million a year on medical research, or less than one-tenth of one percent of the gross national product. Raising this figure is easily within our reach.

"The New Era in Medical Research," a recent national survey sponsored by our own Merck Sharp & Dohme Research Laboratories, emphasized these major problems, which should have priority as we expand:

- a. *The growing scarcity of first-class researchers.* We have to train more and train them better.
- b. *The urgent need for more basic research,* particularly increased support for it by the Federal Government, which is now bemused by the ease of getting funds from Congress for the popular purpose of "curing" specific diseases. Medical research is not conducted that way.
- c. *The continued expansion of applied research and drug development by the pharmaceutical industry,* which paid one-

third of the nation's medical research bill last year and which has a proud record of making that money work efficiently for the benefit of America's health. Let's keep reminding ourselves that almost all of the miracle drugs developed in the past 20 years have emerged in a capitalist environment of profit incentives and patent protection, where new earnings beget new research to turn out more new drugs.

2. Train more doctors — enough to meet the pressing needs of our growing and ageing population, to provide for the needs of a great deal more medical research, and to assist in raising the health standards of the underdeveloped countries.

Dr. Vernon W. Lippard, Dean of Medicine at Yale, said recently that we need 22 more medical schools just to take care of the predicted rise in our population by 1975. This is a bare minimum. It merely maintains our present physician-population ratio. It provides no increase in the number for service abroad. And it counts on foreign medical schools to keep the U. S. supplied with one out of every nine new doctors licensed here each year.

Construction of several new medical schools will have to start at once, if we are to reach Dean Lippard's minimum goal. A new medical school takes eight years from the planning stage to its first crop of graduates.

3. Establish a bold new foreign medical aid program as a companion to our technical assistance effort.

Medicine should be put to work for freedom all over the world. As Dr. Thomas Dooley has said in "The Edge of Tomorrow," the possibilities are "Christ-like in power and simplicity." And Dr. Howard Rusk has already shown the way through his efforts to rehabili-

tate the crippled and the maimed throughout the world.

This new program will require a special kind of training. Doctors, technicians and nurses will have to work abroad under primitive conditions and with diseases not found in our metropolitan society.

We should also continue to support the World Health Organization, which has already reached the half-way mark in its campaign to wipe malaria off the face of the earth, and is making great inroads on other diseases.

4. Raise the standard of living and health of the less privileged groups in our society. The non-white has made greater progress in longevity than the rest of our population in recent years but his life expectancy, which is only 63.2 years, is still 10% lower than that of the whites, which is 70.2.

There is another group that is underprivileged medically. That is the American male, whose chances of outliving his wife are statistically worse than for a husband in any other country in the world.

5. Make a concerted drive to unlock some of the mysteries of the process of ageing, of heart disease and cancer. We have made most of our longevity gains in recent years by cutting the mortality rate of infants and of younger adults and almost no progress in raising the life expectancy of people after they reach 65.

Any advances in knowledge about the ageing process will not only raise the average length of life but make living it a richer experience for our elderly people and for all those who love them.

A major breakthrough on cancer or cardiovascular diseases, which will come, I am convinced, only through greater emphasis on basic research, could raise our life expectancy to 75

in almost one giant leap. It would also win the applause of the world.

6. Lift preventive medicine to the status of equal partnership with the curing of disease. We need a long-range public health education program aimed at persuading the American people to visit the doctor more often when they are well than when they are sick. Periodical physical examinations are standard practice in the Soviet Union.

If we have educated Americans to brush their teeth at least once a day — a most unpleasant chore — we ought to be able to get them to assume more personal responsibility for staying in first-class physical condition.

These, then, are some of the things we must do. If we do them and succeed in lengthening the life expectancy of our people to the age of 75, and do it first, we will accomplish far more than a statistical feat. We will make the nation stronger, and, as a byproduct, we will improve the well-being of our whole population. We will prove to the world that freedom can win the battle of life as well as the battle of liberty and justice.

And, in the process, through the world-wide sharing of the secrets of medicine that our research unfolds, we will help men, women and children everywhere on this earth toward victory in the global war against disease.

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Manufacturing Chemists

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